**January 7, 2004**

# MODIS sensor Working Group (MsWG) Summary

**Attendance:** John Barker, Bob Barnes, Vincent Chiang, Catherine Corlan, Roger Drake, Gene Eplee, Hector Erives, Bob Evans, Bruce Guenther, Gerhard Meister, Chris Moeller, Vince Salomonson, Junqiang Sun, Gary Toller, Aisheng Wu, Jack Xiong, Zhengming Wan, Joe Esposito

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## *Scheduled Items*

## Item 1 Instrument Status

Aqua Status

Aqua is performing nominally. There are no current instrument problems.

Terra SFE anomaly (old issue)

JX) During the pattern test (page 3 of handout) the mirror side pattern reversed. This is seen in the handout charts. SBRS has created a patch that will retain state after an anomaly or restart.

Terra Safe Hold recovery

JX) On December 16, 2003 at 13:00 GMT Terra went into safe hold while passing over the SAA. MCST has shown that just before the anomaly the instrument was performing nominally. The anomaly was caused by navigation control.
On December 24, 2003, science mode was re-established with the NADIR port door closed. This was done in order to get closed-door calibration data (e.g. closed NADIR door RVS, SD calibration with sector rotation, etc.). The black body heaters were started on December 25 and the nominal setting of roughly 290°K was reached in less than 5 hours. The closed door RVS is very close to (consistent with) the DSM results. Less than two days after starting science mode the NADIR door was opened (December 26, 2003). Terra is currently performing a black body warm-up/cool down cycle calibration. In general all detectors that were working prior to the safe hold are still working. The MSCN pattern reversal that occurred due to the SFE anomaly has reverted to the pre-SFE state after recovery from the safe hold. The data is consistent except for an 11-day period after the SFE when the pattern was reversed.

BG) What is meant by "very close to the DSM", can this be stated quantatively?

JX) MCST derived the relative RVS and compared to the April 2003 DSM. The results are consistent with the DSM, with differences being less than 0.1% for all detectors.

CM) Analysis has shown that near the edge of a scan the data is somewhat different, ~0.5-1.0%, for the PC bands. This suggests that it would be better to use the DSM RVS. From what we know about the mirror coating[s], is it reasonable for the [PC] bands to change at large angles?

RD) With respect to the pre-launch RVS tables, I don't recall how witness sample RVS compares to the DSM RVS. We would want to look at NPL data.

BG) The chronology of the witness sample testing left one uncomfortable about which mirror side was used with a particular sample. The DSM RVS can be used to get at this issue.

JX) There are four ratios that exist (*J. Xiong Action: compile data and compare DSM with other RVS measurements*)

**Item 2 Calibration and LUT Update Related Issues**

JX) Terra SD calibrations are back to every two weeks along with Aqua. Calibrations are continuing as scheduled.

BE) Between August 28 and September 11 there was a major change in the visible $m_1$ ($m_1$ was rising at a high rate, then near Aug 28-Sept 1 $m_1$ dropped off quickly before becoming flat).

JX) Due to the SD door being permanently open there is more degradation than there used to be. It takes a few weeks of observations to determine that a change is occurring and to address this in the forward processing. The data improves when reprocessed.

BE) Miami has noted differences between Terra L1B V4.3.0.1 and V4.1.2.3 output while examining VIS and PC bands 31 and 32.

JX) Alice is looking at the data now to discern the reason for the differences. (MCST follow up analysis by Alice shows that there is no problem with the data nor with Level 1B software. The PC band [actually TEB] differences are due to existence of a trailing granule and averaging involving leading/trailing granules.)

## ***Around the Table***

**Participant:** Vince Salomonson – It looks like we do not have to stop calculating the SST product.

BE) Where is "home" for the SST between GSFC and [San Diego] California? In addition, is the SST covered during day and night for both Aqua and Terra?

VS) Programmatically, Eric Lindstrum(sp) is involved but he may not be aware of the issue. GSFC feels that the SST product should continue.

**Participant:** Bob Evans – Miami is looking at the VIS band changes – Discussed this with Jack before Christmas.

**Participant:** Chris Moeller – What is the plan to restore direct broadcast?

VS) There is a meeting Friday. Expect that the direct broadcast will be back on quickly. The latest will be Monday morning.

CM) Destriping of the images has fallen by the wayside but Wisconsin is starting to pick up this topic again.

VS) Is it true that maintenance of the atmospheric profiles program was not approved?

CM) Yes. However, the high-resolution water vapor products show some interesting features.

VS) Someone should share the impact of losing this data product. We may have some room for getting funding for this project.

Comments and Suggestions on MsWG meeting agenda are welcome and should be sent to Jack Xiong.

Next MsWG meeting Wednesday January 21, 2004